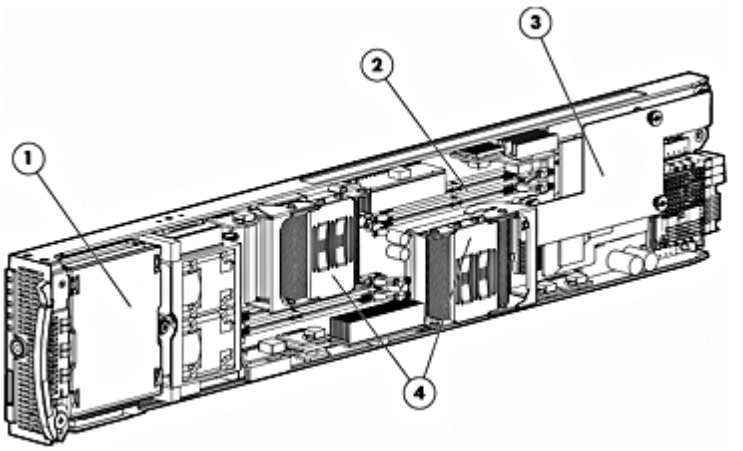
Overview



1. Up to two optional small form factor non-hot pluggable ATA or SAS hard disk drives
2. Up to 16 GB of memory (using optional PC2700 DDR SDRAM)
3. Mezzanine Card: Internal 4 Port SAS HBA (SAS models only) or optional Dual-Port Fibre Channel Adapter
4. Up to two Dual-Core AMD® Opteron™ 200 Series processors

What's New

- Support for the Dual-Core AMD Opteron™ processor Model 280 running at 2.4 GHz/1MB L2 cache per core
- Up to two Dual-Core AMD® Opteron™ 200 Series processors running at 2.4 GHz/1MB L2 cache per core
- The ProLiant BL35p server blade supports two non-hot plug serial attached SCSI (SAS) hard disk drives to deliver even greater performance and reliability within the same ultra-dense form factor and power envelope.
- Support for two internal small form factor serial attached SCSI (SAS) hard disk drives
  - Non-hot pluggable
  - 36GB or 72GB hard disk drive options
  - Hardware RAID 0 or 1 support

At A Glance

Overview

This document covers the HP ProLiant BL35p server blade only. For more information on HP BladeSystems p-Class Infrastructure and HP BladeSystem p-Class Interconnect Components, please see the following QuickSpecs:
HP BladeSystem p-Class Infrastructure: http://h18000.www1.hp.com/products/quickspecs/12330_na/12330_na.HTML
HP BladeSystem p-Class Interconnect Components:
http://h18000.www1.hp.com/products/quickspecs/12331_na/12331_na.HTML

- Processor:
  - Up to two Dual-Core AMD® Opteron™ 200 Series processors running at 2.4 GHz, 2.2 GHz, 2.0 GHz, and 1.8 GHz with 1MB L2 cache per core and 1GHz HyperTransport (lower CPU power rating per processor: 68 watt)
  - AMD® Opteron™ 8000 series chipset
- Memory:
  - 1024 MB (2 x 512 MB) or 2048 MB (4 x 512 MB) PC3200 DDR 400 MHz memory, expandable to 8 GB (using optional PC3200 DDR SDRAM) or 16 GB max (using optional PC2700 DDR SDRAM)
- Storage Controller:
  - Internal 4 Port SAS HBA (on a mezzanine card) supports RAID 0 or 1
  - Dual-Port Fibre Channel Adapter (2Gb) option for SAN connectivity
- Internal Drive Support:
  - Supports up to two optional small form factor serial attached SCSI (SAS) 72GB non-hot plug hard drives or two optional small form factor ATA 60GB non-hot plug hard drives
  - BIOS-Enhanced RAID for Linux enables both primary and secondary hard drives to be bootable
- Network Controller:
  - Two (2) NC7781 PCI-X Gigabit NICs (on a mezzanine card)
  - One 10/100T NIC (embedded) dedicated to iLO management
- USB Ports:
  - Local I/O cable provides two USB ports, one video port, one iLO port and serial port
- Form Factor:
  - HP ProLiant BL35p server blade plugs vertically into HP BladeSystem p-Class Blade Sleeve; sleeve plugs into 6U blade enclosure
  - Up to 96 HP ProLiant BL35p server blades fit in 42U rack in non-redundant power configuration; up to 80 HP ProLiant BL35p server blades fit in 42U in full power redundant configuration
- Management:
  - Integrated Lights-Out (iLO) Advanced Pack with static IP bay configuration and HP BladeSystem wizard features
- Deployment/Serviceability:
  - Integrated Access Tool for blade management and enhanced server blade documentation including Best Practices and Common Procedures guides
- Warranty:
  - Protected by HP Services and a worldwide network of resellers and service providers. Three-year parts, 1 year labor and 1 year on-site limited global warranty. Certain restrictions and exclusions apply. Pre-Failure Notification on processors, memory, and SCSI hard drives.
  - All ATA hard drives offered by HP carry a one year warranty regardless of the base system in which they are installed

Standard Features

Processors	Dual-Core AMD Opteron™ processor Model 280 (2.4 GHz/1MB L2 cache/1 GHz HyperTransport, 68 Watts) Dual-Core AMD Opteron™ processor Model 275 (2.2 GHz/1MB L2 cache/1 GHz HyperTransport, 68 Watts) Dual-Core AMD Opteron™ processor Model 270 (2.0 GHz/1MB L2 cache/1 GHz HyperTransport, 68 Watts) Dual-Core AMD Opteron™ processor Model 265 (1.8 GHz/1MB L2 cache/1 GHz HyperTransport, 68 Watts)		
Upgradeability	Upgradeable to dual processing		
Cache Memory	1MB Level 2 Cache per core 2MB total for Dual-Core models		
Chipset	AMD® Opteron™ 8000 series chipset		
Memory One of the following depending upon model	Type	PC3200 DDR 400 MHz (2 slots) 2:1 interleave PC2700 DDR 333 MHz (2 slots) 2:1 interleave	
	Standard	1024 MB	(2 x 512 MB)
		2048 MB	(4 x 512 MB)
	Maximum	16 GB max (using optional 333 MHz PC2700 DDR SDRAM) 8 GB max (using optional 400 MHz PC3200 DDR SDRAM)	
	NOTE: Memory must be installed in pairs. NOTE: PC2700 and PC3200 memory should not be mixed within the server blade and is not an HP supported configuration.		
Network Adapter	Three (3) network adapters total: Two (2) NC7781 PCI-X Gigabit NICs (on a mezzanine card) with WOL and PXE One 10/100T NIC (embedded) dedicated to iLO management		
Expansion Slots	No PCI slots; all features are integrated. Two (2) USB 1.1 ports, one (1) video port, one (1) iLO port and one (1) serial port Two (2) Local I/O cables ship with each server blade enclosure with enhanced backplane components (281404-B22 and 243564-B22) NOTE: Tested USB devices (keyboard, mouse, floppy) are listed in options section below.		
Integrated Manageability	Integrated Lights-Out (iLO) Management Advanced (ASIC on the system board)		
Internal Storage	Hard Drives	None ship standard	

Standard Features

Maximum Internal Storage	120GB (2 x 60GB small form factor ATA, 5,400 rpm non-hot plug hard drives) 144GB (2 x 72GB small form factor SAS, 10,000 rpm non-hot plug hard drives)	
Graphics	Integrated ATI Rage XL Video Controller with 8 MB SDRAM Video Memory	
Graphics Resolution Supported	Resolution Color Depths	Depths 1280 x 1024, 64k, 256,16 1024 x 768, 16.7M, 64k, 256, 16 800 x 600, 16.7M, 64k, 256, 16 640 x 480, 16.7M, 64k, 256, 16

Fibre Channel on the HP ProLiant BL35p server blade

Two optional fibre channel adapters are supported by the HP ProLiant BL35p. Both adapters are mezzanine circuit boards which connect directly to the server blade system board. These optional fiber channel adapters are available via option kits and must be ordered separately.

- QLogic-based
  - Utilizes a QLogic ISP2312 chipset
  - The HP ProLiant BL35p Dual-Port Fibre Channel Adapter (P/N 354054-B21) is compatible with the HP ProLiant BL35p and HP ProLiant BL30p server blades. It cannot be used with an HP ProLiant BL20p, HP ProLiant BL25p, HP ProLiant BL35p SAS models, HP ProLiant BL40p, or HP ProLiant BL45p server blade.
  - Includes two small form factor pluggable transceivers with LC connectors for installation into the Patch Panel 2, CGESM or GbE2 Interconnect Switch (with the Storage Connectivity Kit)
- Emulex-based
  - Utilizes an Emulex Thor chipset
  - The Emulex-based FC Mezzanine for HP p-Class BladeSystem dual port Fibre Channel HBA (P/N 394588-B21) is compatible with the HP ProLiant BL25p, BL30p, BL35p, and BL45p server blades. It cannot be used with an HP ProLiant BL20p, HP ProLiant BL35p SAS model, or HP ProLiant BL40p server blade as these devices take a different Emulex card.
- Two ports on each Dual-port Fibre Channel Mezzanine Card provide a redundant Fibre Channel connection to each server blade
- Supports up to 2Gb/s Fibre Channel equipment
- There are no SFP's included in the Emulex mezzanine kit for use with ProLiant BL p-Class Fibre Channel pass-through interconnects. If you require SFPs for use with an Emulex mezzanine and a FC pass through interconnect please order an SFP option kit (P/N 397577-B21) which will provide 2 FC SFPs per option kit.

NOTE: Fibre Channel connectivity is not available on the HP ProLiant BL35p SAS models.

Compatible SAN

HP ProLiant BL35p server blades are optimized for StorageWorks arrays:

- Modular Smart Array 1000, Enterprise Virtual Array 5000 (EVA5000) V2, Enterprise Virtual Array 3000 (EVA3000), XP48, 128, 512, 1024

HP ProLiant BL35p server blades are compatible with select 3rd party SANs. Please refer to blade storage website for details: http://h18000.www1.hp.com/products/servers/proliant-bl/p-class/storage.html

ProLiant Essentials	HP Systems Insight	HP Systems Insight Manager (HP SIM) provides a unified, secure and

Standard Features

Foundation Pack Software for the ProLiant BL Server	Manager	extensible environment to centrally manage servers, storage and other infrastructure devices across multiple operating system platforms. Through a single management view, HP SIM provides core management services that include device discovery and identification, event views, health monitoring, inventory data collection, software version control and reporting. HP SIM is built on industry standards and is extensible with value-added ProLiant Essentials, Integrity Essentials and Storage Essentials software to meet individual management needs. For more details on HP SIM visit http://www.hp.com/go/hpsim. HP SIM provides organizations with the following benefits: • Simplifies and consolidates infrastructure lifecycle management using task and query based functionality • Provides the foundation for infrastructure automation and virtualization • Enables IT management based on business processes not hardware platforms • Lowers infrastructure maintenance cost and frees resources for innovation • Maximizes resource utilization with virtualization technologies • Provides a central point of integration between infrastructure and Enterprise management tools such as HP OpenView
	ProLiant Essentials Rapid Deployment Pack	Rapid Deployment Pack (RDP) is an automated deployment and provisioning solution for all ProLiant servers. RDP includes the Altiris Deployment Solution and ProLiant Integration Module featuring ProLiant server pre-configured events for OS installation, and optimized software drivers, firmware and management agents. Every RDP CD includes 10-node trial licenses for evaluation purposes. RDP requires a license for each server deployed and is available for purchase with blade servers. For more information, visit http://www.hp.com/servers/rdp.
	Insight Management Agents	Insight Management Agents should be installed on all HP servers to present system instrumentation, health and configuration information into HP Systems Insight Manager and the HP System Management Homepage. The HP System Management Homepage aggregates systems data from Insight Management Agents and other HP management tools, providing a consolidated browser-based interface for managing individual servers, Insight Management Agents and The HP System Management Homepage are included on ProLiant Support Packs, and can also be installed using the server profiles provided with the ProLiant Essentials Rapid Deployment Pack. For additional information about the Management Agents and the HP System Management Homepage please visit the management Web site at http://www.hp.com/servers/manage
	Subscriber's Choice	Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides software and driver change notifications for ProLiant products. Sign up at http://www.hp.com/go/subscriberschoice and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.

Standard Features

ROMPaq, support software, and configuration utilities	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options, available in the RDP CD, SmartStart or downloadable from Software and Drivers download pages, linked from the SmartStart website at http://www.hp.com/servers/smartstart.
Insight Diagnostics	The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips, available in SmartStart.

NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: http://www.hp.com/servers/proliantessentials

Optional ProLiant Essentials Value Packs

Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs:

- Intelligent Networking Pack - detects and analyzes network bottlenecks or broken network linkages and steers traffic to the optimum route based on network conditions, plus it provides an extra layer of protection. The virus throttle feature of the solution slows the propagation of fast spreading virus
- Performance Management Pack - identifies and explains hardware performance bottlenecks on ProLiant servers and attached options enabling users to better utilize their valuable resources.
- Rapid Deployment Pack (RDP) is an automated deployment and provisioning solution for all ProLiant servers. RDP includes the ProLiant Integration Module featuring ProLiant server pre-configured events for OS installation, and optimized software drivers, firmware and management agents. Every RDP disc includes 10-node trial licenses for evaluation purposes. RDP requires a license for each server deployed and is available for purchase with HP servers. For more information, visit: http://www.hp.com/servers/rdp.
- Virtualization Management Software - Get the most out of server virtualization by unifying the management of physical and virtual servers in HP Systems Insight Manager. The Virtual Machine Management Pack plug-in provides central management and control of VMware and Microsoft virtual machines and provides physical host to virtual machine association. The Server Migration Pack plug-in automates the manual task of migrating servers between physical or virtual platforms.
- Vulnerability and Patch Management Pack - integrates comprehensive vulnerability assessment and advanced patch management functions into HP Systems Insight Manager, to identify and resolve security vulnerabilities quickly, efficiently, and reliably.
- Workload Management Pack - provides easier management of complex environments, improving overall server utilization and enabling customers for the first time to confidently deploy multiple applications on a single multiprocessor ProLiant Server.

NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials Value Pack product QuickSpecs for more information.

SmartStart

SmartStart is a tool that simplifies single server setup, providing a rapid way to deploy reliable and consistent server configurations. To obtain a copy of SmartStart for your blade server, redeem the coupon that is included with your Blade server or order your copy from the SmartStart web site. For more information, please visit the SmartStart Web site at http://www.hp.com/servers/smartstart.
SmartStart version supported (minimum): SmartStart 7.20

Standard Features

OS Support: Dual-Core

1.8 GHz, 2.0 GHz, 2.2 and 2.4 GHz models

Microsoft Windows 2000 Server (licensed by core)
Microsoft Windows 2000 Advanced Server (licensed by core)
Windows Server 2003, Standard Edition
Windows Server 2003, Enterprise Edition
Red Hat Enterprise Linux 3 Update 5
Red Hat Enterprise Linux 4 Update 2
SuSE Linux Enterprise Server 9 SP1
Solaris 10 32/64-bit

NOTE: For a complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix at: http://www.hp.com/go/supportos.
NOTE: For an up-to-date listing of the latest drivers available for the HP ProLiant BL p-Class, please see: http://h18023.www1.hp.com/support/files/server/us/family/model/6067.html.
NOTE: For a more complete and up-to-date information on Linux support, please visit HP Linux Web site at: http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html

Supported Software Offerings

VMware Virtualization Software

Red Hat Enterprise Linux and management bundle for HP BladeSystems

NOTE: For more information on HP Certified and Supported HP ProLiant Servers, please visit the VMware Server Support Matrix at: http://h18004.www1.hp.com/products/servers/software/vmware/hpvmwarecert.html

NOTE: For a more complete and up-to-date information on Linux for HP BladeSystems support, please visit HP Linux website at: http://h18004.www1.hp.com/products/servers/linux/redhat/rh40/index.html

Intelligent Manageability

Integrated Lights-Out (iLO) Advanced Pack

- HP BladeSystem wizard - blade and OS installation and configuration
- Static IP bay configuration
- Virtual Text and Graphical Remote Console
- Virtual CD-ROM and Virtual Floppy
- Virtual Power Button Control
- Dedicated LAN Connectivity
- Automatic IP Configuration via DHCP/DNS/WINS
- Industry Standard 128-bit Secure Sockets Layer (SSL) Security
- IML and iLO Event Logging
- Support for 12 user accounts with customizable access privileges

NOTE: For more information on iLO Advanced visit the website: http://www.hp.com/servers/ilo/

Automatic Server Recovery-2 (ASR-2)
HP Systems Insight Manager
Redundant ROM
Remote Flash ROM
ROM Based Setup Utility (RBSU)
Advanced Configuration and Power Interface Specification Ready (ACPI)
Server and Interconnect Switch Health Logs
Redundant Power Supply Utility
Pre-Failure Warranty (covers processors, as well as SCSI hard drives and memory)
Integrated Management Log (IML)
Network adapter teaming set-up utility

Standard Features

Availability	Dual-Port Fibre Channel Mezzanine Card for redundant SAN connections Redundant ROM on each server blade ECC Memory Network adapter teaming (network fault tolerance, transmit load balancing, switch-assisted load balancing)
RoHS Requirement	For Resellers in countries/regions with RoHS legislation (see NOTE) (e.g. EU, China, etc.) The use of the noted material in a solution and subsequent resale of that solution will result in the solution no longer meeting the requirements of RoHS legislation. NOTE: Directive 2002/95/EC restricts the use of lead, mercury, cadmium, hexavalent chromium, PBBs and PBDEs in electronic products. Countries/regions outside the EU, eg. China, are introducing similar legislation. References to 'RoHS legislation' means requirements of Directive 2002/95/EC or to similar substance restriction legislation enacted by any country/region outside the EU.
Security	Power-on password Administrator's password Integrated Lights-Out provides user authentication via directory services or 12 customizable user accounts Integration Lights-Out supports SSH and SSL encryption Integrated Lights-Out can be disabled via a Global Setting
Factory Express Portfolio for Servers and Storage	HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSA1000, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches. For more information on Factory Express services for your specific server model please contact your sales representative or go to http://www.hp.com/go/factory-express.
Service and Support	This product is covered by a global limited warranty and supported by HP Services and a worldwide network of resellers and service providers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. NOTE: Server Blade Limited Warranty includes 3 year Parts, 3 year Labor, 3-year on-site support. This warranty supports the HP ProLiant BL20p, HP ProLiant BL25p, HP ProLiant BL40p and HP ProLiant BL45p Server Blades. NOTE: Server Blade Limited Warranty includes 3 year Parts, 1 year Labor, 1-year on-site support. This warranty supports the HP ProLiant BL30p and HP ProLiant BL35p Server Blades. NOTE: Server Blade Enclosure Limited Warranty includes 3 year Parts, 3 year Labor, 3-year on-site support. NOTE: Server Blade Interconnect Limited Warranty includes 3 year Parts, 3 year Labor, 3-year on-site support. Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

NOTE: ATA drives have a 1 year warranty.

The HP Care Pack service part numbers below for ProLiant BL p-Class server blades, cover the server blade and all HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the server

HP Care Pack services for HP BladeSystem p-Class server blade enclosure covers the enclosure including patch panels, HP supported Ethernet interconnects, power enclosure with power supplies and power distribution.

HP services provide continuous care and support expertise with committed response designed to meet your IT and business needs.

To fully capitalizing on your HP BladeSystem servers' capabilities requires a service partner who thoroughly understands your server technology and systems environment. HP Services, an industry leader in provision of multi vender support solutions provides a range of support services designed to meet the varying needs of business. Whether an SMB or large global corporation HP has a HP BadeSystem server support offer to help you speedily deploy and maximize system uptime.

Enhanced Care - Minimum recommended service support offer designed to ensure customers have access to expert assistance, whenever they need it.

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years.

Continuance Care - Recommended service delivering cost-effective support options designed to extend HP Services committed response and guaranteed fix times, designed to speed problem identification and resolution.

4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years.

Total Care - Highest HP Support service level recommend to help increase IT performance and availability with comprehensive, integrated hardware and software services

Support Plus 24 - Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays.

Deployment Services - HP Installation and Start Up services designed to take time, risk, and worry out of the deployment of HP BladeSystem servers - and free customers IT support staff to focus on what they do best, their business.

Installation & Start-Up service for HP BladeSystem Infrastructure plus HP BladeSystem Enhanced Network Installation and Start-UP as per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays

For a complete listing of service offerings and information visit:
http://www.hp.com/services/bladesystemservices
http://www.hp.com/go/proliant/carepack

Dual-Core Models

ProLiant BL35p 2.4GHz-1MB, DC, 2GB, SAS (2P) 406024-B21	Processor(s)	Two (2) Dual-Core AMD Opteron™ 200 Series processors Model 280 2.4 GHz (68 Watts) standard
	Cache Memory	1MB Level 2 writeback per core
	Memory	2048 MB (standard) of PC3200 DDR SDRAM 400 MHz 8 GB (maximum) of PC3200 DDR SDRAM 400 MHz 16 GB (maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 4 DIMM slots
	Network Adapter	Two (2) NC7781 PCI-X Gigabit NICs (on a mezzanine card) with WOL and PXE One (1) 10/100T NIC (embedded) dedicated to iLO management
	Storage Controller	Internal 4 Port SAS HBA (on a mezzanine card) supports RAID 0 or 1
	Hard Drives	None ship standard
	Internal Storage	Up to 144GB maximum (with optional non-hot plug SAS hard drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Blade Sleeve. Blade sleeve supports 1 or 2 BL30p and BL35p blades, or any combination of BL30p and BL35p blades. Blade sleeve plugs vertically into HP BladeSystem p-Class Enhanced Server Blade Enclosure

ProLiant BL35p 2.2GHz-1MB, DC, 2GB, SAS (2P) 395222-B21	Processor(s)	Two (2) Dual-Core AMD Opteron™ 200 Series processors Model 275 2.2 GHz (68 Watts) standard
	Cache Memory	1MB Level 2 writeback per core
	Memory	2048 MB (standard) of PC3200 DDR SDRAM 400 MHz 8 GB (maximum) of PC3200 DDR SDRAM 400 MHz 16 GB (maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 4 DIMM slots
	Network Adapter	Two (2) NC7781 PCI-X Gigabit NICs (on a mezzanine card) with WOL and PXE One (1) 10/100T NIC (embedded) dedicated to iLO management
	Storage Controller	Internal 4 Port SAS HBA (on a mezzanine card) supports RAID 0 or 1
	Hard Drives	None ship standard
	Internal Storage	Up to 144GB maximum (with optional non-hot plug SAS hard drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Blade Sleeve. Blade sleeve supports 1 or 2 BL30p and BL35p blades, or any combination of BL30p and BL35p blades. Blade sleeve plugs vertically into HP BladeSystem p-Class Enhanced Server Blade Enclosure

Models

ProLiant BL35p 1.8GHz-1MB, DC, 1GB, SAS (1P) 394876-B21	Processor(s)	One (1) Dual-Core AMD Opteron™ processor Model 265 1.8 GHz (68 Watts) standard (up to 2 supported)
	Cache Memory	1MB Level 2 writeback per core
	Memory	1024 MB (standard) of PC3200 DDR SDRAM 400 MHz 8 GB (maximum) of PC3200 DDR SDRAM 400 MHz 16 GB (maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 4 DIMM slots
	Network Adapter	Two (2) NC7781 PCI-X Gigabit NICs (on a mezzanine card) with WOL and PXE One (1) 10/100T NIC (embedded) dedicated to iLO management
	Storage Controller	Internal 4 Port SAS HBA (on a mezzanine card) supports RAID 0 or 1
	Hard Drives	None ship standard
	Internal Storage	Up to 144GB maximum (with optional non-hot plug SAS hard drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Blade Sleeve. Blade sleeve supports 1 or 2 BL30p and BL35p blades, or any combination of BL30p and BL35p blades. Blade sleeve plugs vertically into HP BladeSystem p-Class Enhanced Server Blade Enclosure

ProLiant BL35p 2.4GHz-1MB, DC, 2GB, (2P) 399601-B21	Processor(s)	Two (2) Dual-Core AMD Opteron™ 200 Series processors Model 280 2.4 GHz (68 Watts) standard
	Cache Memory	1MB Level 2 writeback per core
	Memory	2048 MB (standard) of PC3200 DDR SDRAM 400 MHz 8 GB (maximum) of PC3200 DDR SDRAM 400 MHz 16 GB (maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 4 DIMM slots
	Network Adapter	Two (2) NC7781 PCI-X Gigabit NICs (on a mezzanine card) with WOL and PXE One (1) 10/100T NIC (embedded) dedicated to iLO management
	Hard Drives	None ship standard
	Internal Storage	Up to 120GB maximum (with optional non-hot plug ATA hard drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Blade Sleeve. Blade sleeve supports 1 or 2 BL30p and BL35p blades, or any combination of BL30p and BL35p blades. Blade sleeve plugs vertically into HP BladeSystem p-Class Enhanced Server Blade Enclosure

Models

ProLiant BL35p 2.2GHz-1MB, DC, 2GB (2P) 392446-B21	Processor(s)	Two (2) Dual-Core AMD Opteron™ processors Model 275 2.2 GHz (68 Watts) standard
	Cache Memory	1MB Level 2 writeback per core
	Memory	2048 MB (standard) of PC3200 DDR SDRAM 400 MHz 8 GB (maximum) of PC3200 DDR SDRAM 400 MHz 16 GB (maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 4 DIMM slots
	Network Adapter	Two (2) NC7781 PCI-X Gigabit NICs (on a mezzanine card) with WOL and PXE One (1) 10/100T NIC (embedded) dedicated to iLO management
	Hard Drives	None ship standard
	Internal Storage	Up to 120GB maximum (with optional non-hot plug ATA hard drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Blade Sleeve. Blade sleeve supports 1 or 2 BL30p and BL35p blades, or any combination of BL30p and BL35p blades. Blade sleeve plugs vertically into HP BladeSystem p-Class Enhanced Server Blade Enclosure
ProLiant BL35p 2.0GHz-1MB, DC, 2GB (2P) 392448-B21	Processor(s)	Two (2) Dual-Core AMD Opteron™ processors Model 270 2.0 GHz (68 Watts) standard
	Cache Memory	1MB Level 2 writeback per core
	Memory	2048 MB (standard) of PC3200 DDR SDRAM 400 MHz 8 GB (maximum) of PC3200 DDR SDRAM 400 MHz 16 GB (maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 4 DIMM slots
	Network Adapter	Two (2) NC7781 PCI-X Gigabit NICs (on a mezzanine card) with WOL and PXE One (1) 10/100T NIC (embedded) dedicated to iLO management
	Hard Drives	None ship standard
	Internal Storage	Up to 120GB maximum (with optional non-hot plug ATA hard drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Blade Sleeve. Blade sleeve supports 1 or 2 BL30p and BL35p blades, or any combination of BL30p and BL35p blades. Blade sleeve plugs vertically into HP BladeSystem p-Class Enhanced Server Blade Enclosure

Models

ProLiant BL35p 1.8GHz-1MB, DC, 1GB (1P) 392450-B21	Processor(s)	One (1) Dual-Core AMD Opteron™ processor Model 265 1.8 GHz (68 Watts) standard (up to 2 supported)
	Cache Memory	1MB Level 2 writeback per core
	Memory	1024 MB (standard) of PC3200 DDR SDRAM 400 MHz 8 GB (maximum) of PC3200 DDR SDRAM 400 MHz 16 GB (maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 4 DIMM slots
	Network Adapter	Two (2) NC7781 PCI-X Gigabit NICs (on a mezzanine card) with WOL and PXE One (1) 10/100T NIC (embedded) dedicated to iLO management
	Hard Drives	None ship standard
	Internal Storage	Up to 120GB maximum (with optional non-hot plug ATA hard drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Blade Sleeve. Blade sleeve supports 1 or 2 BL30p and BL35p blades, or any combination of BL30p and BL35p blades. Blade sleeve plugs vertically into HP BladeSystem p-Class Enhanced Server Blade Enclosure

NOTE: HP does not allow factory integration of options into standard models listed above. Configure-to-order servers must start with a CTO Chassis.
NOTE: This product offering does not support HP Factory Express Server Configuration Level 1.
NOTE: FIO indicates that this option is a Factory Installable Option.

Step 1: Base Server Blade Configuration

Model	HP ProLiant BL35p Configurable Model CTO Blade	382734-405
	Factory Integrated Model ships with: - One embedded 10/100T NIC for iLO - Integrated Lights-Out (iLO) Management with Advanced Pack features	
	HP ProLiant BL35p SAS Configurable Model CTO Blade	398605-405
	Factory Integrated Model ships with: - Internal 4 Port SAS HBA (on a mezzanine card) - One embedded 10/100T NIC for iLO - Integrated Lights-Out (iLO) Management with Advanced Pack features NOTE: HP ProLiant BL35p SAS Configurable Model CTO Blade (P/N 398605-405) does not support single-core processors.	

Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

Processor	Dual-Core AMD Opteron™ Model 280 2.4 GHz/68W FIO ALL NOTE: If dual processor configurations are desired, select one 399602-L21 and one 399602-B21.	399602-L21
	Dual-Core AMD Opteron™ Model 275 2.2 GHz/68W FIO ALL NOTE: If dual processor configurations are desired, select one 392447-L21 and one 392447-B21.	392447-L21
	Dual-Core AMD Opteron™ Model 270 2.0 GHz/68W FIO ALL NOTE: If dual processor configurations are desired, select one 392449-L21 and one 392449-B21.	392449-L21
	Dual-Core AMD Opteron™ Model 265 1.8 GHz/68W FIO ALL NOTE: If dual processor configurations are desired, select one 392451-L21 and one 392451-B21.	392451-L21

Configuration Information - Factory Integrated Models

Memory	For 1 GB Total Memory:	
	1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB)	376638-B21
	For 2 GB Total Memory, choose A or B:	
	A) 2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB)	376639-B21
	B) 2 x 1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB)	376638-B21
	For 4 GB Total Memory, choose A or B:	
	A) 4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB)	379300-B21
	B) 2 x 2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB)	376639-B21
	For 2 GB Total Memory, choose A or B:	
	A) 2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB)	376639-B21
	For 8 GB Total Memory, choose A or B:	
	A) 8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB)	395409-B21
	B) 2 x 4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB)	379300-B21
	For 16 GB Total Memory:	
	2 x 8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB)	395409-B21
	NOTE: Two-way interleaving memory is enabled when an identical pair of DIMMs is installed.	
	NOTE: Maximum performance in a two processor (2P) server blade is achieved when Option B memory configurations are utilized.	

Communications	HP ProLiant BL25/35/45p NIC Mezz FIO Base	382850-B21
NOTE: Must select one	Or upgrade to:	
	HP ProLiant BL25p/35p/45p Dual NC370i Multifunction Network Adapter	384043-B21
	NOTE: Accelerated iSCSI is not yet supported for Linux environments, and RDMA is not yet supported for Windows or Linux environments. Future support is planned for both.	
	NOTE: A minimum of 1 GB of memory per port is required for NC370x adapters, with a maximum of two NC370x ports permitted in a server.	

Step 3: Choose Additional Options for Factory Integration

Hard Drive	SAS - Universal Hard Drive	
	HP 36GB 3G SAS 10K NHP SFF HDD	384038-B21
	HP 72GB 3G SAS 10K NHP SFF HDD	384141-B21
	NOTE: Supported on SAS models only	
	ATA Non-Hot Plug	
	HP BL30p/BL35p 60G ATA HDD ALL	354052-B21

Configuration Information - Factory Integrated Models

Fibre Channel Option	Emulex-based BL25/30/35/45p Dual Port Fibre Channel HBA NOTE: SFPs for use with pass through SAN switches not included with the Emulex-based Fibre Channel Mezzanine card. If SFPs required please order the SFP option kit (P/N 397577-B21) which includes 2 2Gb SFPs per option kit.	394588-B21
	HP 2-2Gb SFP for Fibre Channel pass through kit NOTE: Must select if SFP for use with pass through SAN switches is required when ordering Emulex-based Fibre Channel Mezzanine card for HP p-Class BladeSystem (p/N 394757-B21.	397577-B21
	BL30p/BL35p Dual Port Fibre Channel Adapter NOTE: The BL30p/BL35p Dual Port Fibre Channel Adapter is QLogic based.	354054-B21
	NOTE: For additional options, including HP BladeSystem p-Class blade sleeves, enhanced server blade enclosure, interconnect options and power subsystem options please refer to the "Options" section below. NOTE: Fibre Channel connectivity is not available on the HP ProLiant BL35p SAS model (P/N 398605-405).	

Options

NOTE: Some options may not be factory integratable. Please contact your local sales representative for additional information.

Unique Options	HP BladeSystem p-Class Blade Sleeve Kit	354101-B21
	NOTE: Each blade sleeve supports one or two HP ProLiant BL30p/HP ProLiant BL35p server blades. HP ProLiant BL30p and BL35p server blades may be mixed within the blade sleeve.	
ProLiant Essentials Value Pack Software	**ProLiant Essentials Intelligent Networking Pack Windows Edition and Linux Edition**	
	ProLiant Essentials Intelligent Networking Pack Windows Edition, Single Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	372906-B21
	ProLiant Essentials Intelligent Networking Pack Linux Edition, Single Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	397004-B21
	NOTE: For additional ProLiant Intelligent Networking Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12062_na/12062_na.HTML http://h18000.www1.hp.com/products/quickspecs/12327_na/12327_na.HTML	
	ProLiant Essentials Performance Management Pack	
	ProLiant Essentials Performance Management Pack, Single-Server License NOTE: For use with a single server. Contains one license with a unique license activation key, HP Management CD and documentation. NOTE: The most recent version of the software can always be downloaded at http://www.hp.com/products/pmp.	306696-B21
	NOTE: For additional ProLiant Performance Management Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11925_na/11925_na.HTML	
	ProLiant Essentials Rapid Deployment Pack	
	Rapid Deployment Pack, Single-Server License NOTE: This license allows 1 server to be deployed and managed via RDP.	267196-B21
	NOTE: For additional ProLiant Essentials Rapid Deployment Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11053_na/11053_na.HTML	
	ProLiant Essentials Server Migration Pack	
	ProLiant Essentials Server Migration Pack, Single-Migration License NOTE: Contains one license, enabling 1 server migration, with a unique license activation key and documentation. NOTE: This license allows 1 server to be migrated from a physical server to a virtual machine. Or this license can be used to migrate a virtual machine from one virtualization layer i.e. VMware GSX to a different virtualization layer such as VMware ESX or Microsoft Virtual Server 2005.	375345-B21
	NOTE: For additional ProLiant Server Migration Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12328_na/12328_na.HTML	
	ProLiant Essentials Workload Management Pack	

Options

	ProLiant Essentials Workload Management Pack, Single Server License NOTE: For additional ProLiant Workload Management Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11452_na/11452_na.HTML	303284-B21
	ProLiant Essentials Virtual Machine Management Pack	
	ProLiant Essentials Virtual Machine Management Pack, Single-Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	372214-B21
	NOTE: For additional ProLiant Virtual Machine Management Pack License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12328_na/12328_na.HTML	
	ProLiant Essentials Vulnerability and Patch Management Pack	
	ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	371645-B21
	NOTE: For additional ProLiant Vulnerability and Patch Management Pack License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12111_na/12111_na.HTML	
	NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials Value Pack product QuickSpecs for more information. NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: http://www.hp.com/servers/proliantessentials.	
HP Control Tower BladeSystem p-class Management Software	HP Control Tower for HP BladeSystem, Single Server License. No media included. NOTE: For use with a single blade server. Contains one license with a single unique license activation key.	412957-B21
	HP Control Tower for HP BladeSystem, Eight-pack (8-pack) Server License. No media included. NOTE: For use with eight (8) blade servers. Contains eight (8) licenses with a single unique license activation key.	412958-B21
	HP Control Tower for HP BladeSystem, Flexible License. No media included. NOTE: For use with multiple servers (minimum of 5). This part number can be used to purchase multiple licenses with a single activation key. The quantity ordered for this part number will be the quantity of licenses included in the kit in the form of a corresponding activation key. Use the same key to activate all licenses in the actual quantity ordered. For a given order, one kit will be delivered with the activation key.	412959-B21

Options

Processor	Dual-Core AMD Opteron™ processor Model 280 2.4 GHz/1M/68W Processor Option Kit	399602-B21
	Dual-Core AMD Opteron™ processor Model 275 2.2 GHz/1M/68W Processor Option Kit	392447-B21
	Dual-Core AMD Opteron™ processor Model 270 2.0 GHz/1M/68W Processor Option Kit	392449-B21
	Dual-Core AMD Opteron™ processor Model 265 1.8 GHz/1M/68W Processor Option Kit	392451-B21
	Single-Core AMD Opteron™ processor Model 250 2.4 GHz/1M/68W Processor Option Kit	381883-B21
Memory	8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB) NOTE: Must install in pairs	395409-B21
	4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB) NOTE: Must install in pairs	379300-B21
	2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB) NOTE: Must install in pairs	376639-B21
	1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB) NOTE: Must install in pairs	376638-B21
Hard Drive	SAS - Universal Hard Drive	
	HP 36GB 3G SAS 10K NHP SFF HDD	384038-B21
	HP 72GB 3G SAS 10K NHP SFF HDD	384141-B21
	NOTE: Supported on SAS models only	
	ATA Non-Hot Plug	
	HP BL30p/BL35p 60G ATA HDD ALL	354052-B21
Communications	Multifunction NIC with support for iSCSI, RDMA, TOE:	
	HP ProLiant BL25p/35p/45p Dual NC370i Multifunction Network Adapter	384043-B21
	NOTE: Accelerated iSCSI is not yet supported for Linux environments, and RDMA is not yet supported for Windows or Linux environments. Future support is planned for both.	
	NOTE: A minimum of 1 GB of memory per port is required for NC370x adapters, with a maximum of two NC370x ports permitted in a server.	

Options

ProLiant BL30p/BL35p Fibre Channel Adapter	Emulex-based BL25/30/35/45p Dual Port Fibre Channel HBA	394588-B21
	Dual-Port Fibre Channel Adapter (2-Gb) Kit (option) for HP ProLiant BL30p or HP ProLiant BL35p server blades NOTE: This Fibre-Channel adapter is QLogic-based NOTE: When using this adapter, Patch Panel 2, CGESM, or a GbE2 Interconnect Switch Kit (with Storage Connectivity Kit) must be used to provide pass through of the Fibre Channel signals. NOTE: For additional information on HP p-Class Interconnect Kits please visit: http://h18000.www1.hp.com/products/quickspecs/12331_na/12331_na.HTML NOTE: Fibre Channel connectivity is not available on the HP ProLiant BL35p SAS models.	354054-B21

Tape Libraries	HP StorageWorks MSL6000 Tape Library	
	Ultrium 960 technology	
	MSL6030, 1 drive, 30 slots, Ultrium 960	AD606B
	MSL6030, 1 drive, 30 slots, Ultrium 960, with embedded FC router	AD608B
	MSL6060, 2 drive, 60 slots, Ultrium 960	AD607B
	MSL6060, 2 drive, 60 slots, Ultrium 960, with embedded FC router	AD609B
	SDLT 600 technology	
	MSL6052, 2 drive, 52 slots, SDLT 600	AD587A
	MSL6052, 2 drive, 52 slots, SDLT 600, with embedded FC router	AD588A
	Ultrium 460 technology	
	MSL6030, 1 drive, 30 slots, Ultrium 460	AD598B
	MSL6030, 1 drive, 30 slots, Ultrium 460, with embedded FC router	AD600B
	MSL6060, 2 drive, 60 slot Ultrium 460, with embedded FC router	AD601B
	NOTE: Please reference the MSL6000 Tape Library QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs	
	HP StorageWorks Virtual Library Systems	
	HP StorageWorks 6105 Virtual Library System	AF728A
	HP StorageWorks 6510 Virtual Library System	AF729A
	HP StorageWorks 6840 Virtual Library System	AG051A
	HP StorageWorks 6109 Virtual Library System	AG167A
	HP StorageWorks 6518 Virtual Library System	AG168A
	HP StorageWorks 6870 Virtual Library System	AG169A
	NOTE: Please reference the Virtual Library Systems QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution. Reference current compatibility information at http://www.hp.com/go/ebs	

Options

HP StorageWorks Modular Smart Array 1000	HP StorageWorks Modular Smart Array 1000	201723-B22
	NOTE: Please see the StorageWorks Modular Smart Array 1000 QuickSpecs for additional options and configuration information at: http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML	
Cluster Options	ProLiant Cluster Starter kit	364023-B21
	NOTE: For additional information regarding the HP ProLiant Cluster Starter Kit please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11935_na/11935_na.html	
	ProLiant Cluster HA/F200 for the Entry Level SAN	364026-B22
	NOTE: For additional information regarding the ProLiant Cluster for Entry Level SAN please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11932_na/11932_na.html	
	ProLiant Cluster HA/F500 for the Enterprise SAN	364024-B21
	NOTE: For additional information regarding the ProLiant Cluster HA/F500 for Enterprise SAN please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11933_na/11933_na.html	
	NOTE: For configuration/certification options for the HP Parallel Database Cluster for Oracle RAC please go to: http://www.hp.com/solutions/highavailability/oracle	
	HP Serviceguard for Linux ProLiant Cluster A.11.16 for SUSE SLES 9 and Red Hat EL 3 & 4 (2 node license cluster kit)	305199-B26
	HP Serviceguard for Linux A.11.16 for SUSE SLES9 and Red Hat EL 3 & 4 (single license version)	307754-B26
	HP Serviceguard for Linux and Red Hat Global File System - 1 year subscription	T2798AA#001
	HP Serviceguard for Linux and Red Hat Global File System - 3 years subscription	T2798AA#003
	NOTE: For additional information regarding HP Serviceguard for Linux, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11518_na/11518_na.html	
	NOTE: For configuration/certification options for HP Serviceguard for Linux please go to: http://www.hp.com/info/sglx	
USB Options	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
	USB Optical Scroll Mouse (Carbonite)	DD441B
	HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	HP USB 04 Standard Keyboard	DT528A#xxx
	USB 2.0 4-port HUB	DG954AA
	HP 1GB Drive Key II- USB 2.0 Flash Drive	AG382AA
	HP 512MB Drive Key II- USB 2.0 Flash Drive	ED516AA
	NOTE: USB 2.0 devices will operate at USB 1.1 speeds.	

Options

HP Rack 5000 Series (Graphite Carbonite)	HP 5642 Rack - Unassembled	358254-B21
	NOTE: Please see the HP Rack 5642 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12074_na/12074_na.HTML	
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower	
HP Rack 10000 G2 Series (Graphite Metallic)	10642 G2 (42U) Rack Cabinet - Pallet	AF001A
	10642 G2 (42U) Rack Cabinet - Shock Pallet	AF002A
	10642 G2 (42U) Rack Cabinet - Crated	AF003A
	10642 G2 (42U) Rack Cabinet, with Extension - Shock Pallet	AF004A
	10636 G2 (36U) Rack Cabinet - Shock Pallet	AF011A
	10636 G2 (36U) Rack Cabinet - Crated	AF012A
	10636 G2 (36U) Rack Cabinet, with Extension - Shock Pallet	AF013A
	10636 G2 (36U) Rack Cabinet, without door - Shock Pallet	AF014A
	NOTE: Please see the Rack 10000 G2 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12402_na/12402_na.HTML	
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower.	
HP Rack 10000 Series (Graphite Metallic)	10642 (42U) Infrastructure Rack (Low Voltage)	379006-001
	10642 (42U) Infrastructure Rack (High Voltage)	379005-001
	HP S10614 (14U) Rack Cabinet - Shock Pallet	292302-B22
	HP 10842 (42U, 800mm wide) Rack Cabinet - Pallet	257415-B21
	NOTE: Server Blade Enclosures must be field integrated into the 10842 racks. Factory integration of Server Blade Enclosures into the 10842 is not supported.	
	HP 10842 (42U, 800mm wide) Rack Cabinet - Shock Pallet	257415-B22
	NOTE: Server Blade Enclosures must be field integrated into the 10842 racks. Factory integration of Server Blade Enclosures into the 10842 is not supported.	
	HP 10647 (47U) Rack Cabinet - Pallet	245160-B21
	HP 10647 (47U) Rack Cabinet - Shock Pallet	245160-B23
	HP 10622 (22U) Rack Cabinet - Pallet	245163-B21
	HP 10622 (22U) Rack Cabinet - Shock Pallet	245163-B22
	HP 10622 (22U) Rack Cabinet - Crated	245163-B23
	NOTE: xxxxxx-B21 (pallet) used to ship empty racks shipped on a truck. xxxxxx-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels). xxxxxx-B23 (crated) used for air shipments of empty racks.	
	NOTE: It is mandatory to use a shock pallet in order to ship racks with equipment installed.	
	NOTE: Please see the Rack 10000 QuickSpecs for additional part number and Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/10995_na/10995_na.HTML	
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower.	

Options

Monitors and Keyboards	TFT7210R Rack Mounted 17" Monitor	348373-B21
	NOTE: For a complete list of Monitors please view the following URL: http://www.hp.com/go/kvm.	
	TFT7600 Rackmount Keyboard Monitor	AG052A
	1U Rackmount Keyboard with USB	AG072A
	NOTE: For additional information regarding Rack Options, please see the following URL: http://www.hp.com/go/rackandpower.	
HP KVM Switch Options	Server Console Switch (KVM), 0 x 1 x 8 port	336044-B21
	Server Console Switch (KVM), 0 x 2 x 16 port	336045-B21
	PS/2 Interface Adapter, 1 pack	262588-B21
	PS/2 Interface Adapter, 8 pack	262587-B21
	USB Interface Adapter, 1 pack	336047-B21
	Serial Interface adapter - 1 Pack with power supply	373035-B21
	NOTE: Cat5e cables are required to connect Interface Adapters to Consoles Switches. Cat52 cables can be found at the following URL: http://www.hp.com/go/kvm	
	HP 1x4 USB/PS2 KVM Switch, TT	371301-D71
	HP 1x4 USB/PS2 KVM Switch, RM	371302-B21
	HP PS2 KVM Cable with audio, 6'-2-pack	371730-B21
	HP USB KVM Cable with audio, 6'-2-pack	371729-B21
	NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm	
HP Serial Console Server Options	HP 16 Port Serial Console Server	AF101A
	HP 48 Port Serial Console Server	AF102A
	Serial Adapter, RJ45-DB9 DCE Female, 1 Pack	AF103A
	Serial Adapter, RJ45-DB9 DCE Female, 8 Pack	AF110A
	NOTE: Cat5e cables are required to connect Serial Adapters to Serial Console Servers. Additional Serial Adapters and Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm.	
	2x1x16 IP Console Switch with Virtual Media	AF601A
	4x1x16 IP Console Switch with Virtual Media	AF602A
	2x16 Server Console Switch with Virtual Media	AF600A
	USB Virtual Media Interface Adapter	AF603A
	PS/2 Virtual Media Interface Adapter, 1 pack NOTE: Requires PS/2 and one USB port on server.	AF604A
	NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm.	
Service and Support Offerings (HP Care Pack Services)	NOTE: The HP Care Pack service part numbers below for HP ProLiant BL p-Class server blades, cover the server blade and all HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the server.	

Hardware Services On-site Service	
Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years, Electronic	UD186E
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	UD187E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UD188E
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UD189E
NOTE: The HP Care Pack service part numbers below for HP BladeSystem p-Class server blade enclosure covers the enclosure including patch panels, HP supported Ethernet interconnects, power enclosure with power supplies and power distribution.	
Hardware Services On-site Service	
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	HC031E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	HC032E
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	HC033E
NOTE: The HP Care Pack service part numbers below covers the HP BladeSystem Brocade and McData SAN Switches.	
Hardware Services On-site Service	
Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years, Electronic	UC007E
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	UC008E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UC009E
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UC023E
Installation & Start-up Services	
HP Installation & Startup Service for HP BladeSystem Infrastructure, Electronic NOTE: - provides for an integrated hardware and software implementation that includes remote service planning, onsite deployment of hardware and software, installation verification testing and customer orientation. Hardware deployment covers the installation of a single BladeSystem enclosure that include server blades (up to 16), Ethernet network interconnect, and power options. Software deployment covers the installation and configuration of HP Systems Insight Manager (SIM), HP Rapid Deployment Pack (RDP), and deploy up to two operating system editions of either Windows or Linux, using scripted operating system installation software	UC905E
ProLiant BL p-Class Blade Server Hardware Installation, Electronic	UA219E
ProLiant BL p-Class Enclosure and Server Blade Hardware Installation, Electronic	U4971E
Provides for the Installation and Start-up of Compaq's Rapid Deployment Pack, Electronic NOTE: Provides installation on a Customer supplied server designated as a Deployment Server. Includes the deployment of a single server. This new server will be deployed using either one of the pre-configured scripts or an image. In addition, the service will provide for the capture and storage of the configuration of the newly deployed server and orientation on product usage. To be delivered during standard office ours, standard office days.	U5683E
Provides for the Installation and Start-up of Rapid Deployment Pack Implementation of Rapid Deployment Pack (Basic) (Electronic)	UA042E

HP ProLiant Essentials Vulnerability and Patch Management Pack, Electronic NOTE: Installation and Startup Service. Service coverage: onsite installation of the Vulnerability and Patch Management (VPM) software on a customer designated server, configuration of the VPM software to acquire security patches, enabling the VPM software to scan up to five (5) systems, applying the security patches to the designated servers, generating a report from VPM that shows the vulnerability assessment results, and providing customer with an orientation to the software.	UC929E
Provides for the Installation and Start-up of System Insight Manager (Electronic)	UA041E
Provides for the Installation and Start-up of System Insight Manager (Electronic)	UA040E

NOTE: For more information, customer/resellers can contact http://www.hp.com/hps/.

Software Operating Environment Care Packs

Microsoft Software Operating Environment Software Telephone 9x5 - 3 incident (Electronic)	U8169E
Red Hat Software Operating Environment Software Telephone 9x5 - 10 incident (Electronic)	U3402E
SUSE Software Operating Environment Software Telephone 9x5 - 3 incident (Electronic)	U9615E
ProLiant Essentials Operating Environment, - 5 Day, 8x5,1 year, 3 incident (Electronic)	U8222E

Memory

DIMM installation guidelines:

1. All DIMMs must be PC3200 DDR 400 MHz SDRAM DIMMs, or PC2700 DDR 333 MHz SDRAM DIMMS.
2. Both DIMM slots in a memory bank must be populated.
3. Both DIMMs in a memory bank must be identical.
4. Processor 1 memory bank must always be populated.
5. For optimal performance in most applications, populate the memory bank for every populated processor socket.
6. DIMM banks are active only when the corresponding processor socket is populated.

HP ProLiant BL35p Server Blade (1P model)

Standard Memory

1024 MB of PC3200 DDR SDRAM running at 400 MHz (2 x 512 MB)

Standard Memory Replaced with Optional Memory

Up to 4096 MB of PC3200 DDR SDRAM DIMM memory is available with the removal of standard memory and the installation of optional DDR SDRAM DIMM memory expansion kits.

Up to 8192 MB of PC2700 DDR SDRAM DIMM memory is available with the removal of standard memory and the installation of optional PC2700 SDRAM DDR DIMM memory expansion kits.

NOTE: Maximum memory configuration with one processor installed using PC3200 DDR SDRAM DIMMs is 4096 MB (2 x 2048 MB), or 8192 MB using PC2700 DDR SDRAM DIMMs (2 x 4096 MB.) Second processor must be installed in order to use the 2nd bank of memory (Slots 3 and 4.) Maximum memory configuration with two processors installed using PC3200 DDR SDRAM DIMMS is 8192 MB (4 x 2048 MB), or 16384 MB using PC2700 DDR SDRAM DIMMs (4 x 4096 MB.)

Memory		Slot			
		1	2	3	4
Standard	1024 MB	512 MB	512 MB	Empty	Empty
Optional	2048 MB	1024 MB	1024 MB	Empty	Empty
4 GB PC3200 Maximum	4096 MB	2048 MB	2048 MB	Empty	Empty
8 GB PC2700 Maximum	8192 MB	4096 MB	4096 MB	Empty	Empty

Following are memory options available from HP:

- 8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB) 395409-B21
- 4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB) 379300-B21
- 2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB) 376639-B21
- 1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB) 376638-B21

Memory

HP ProLiant BL35p Server Blade (2P model)

Standard Memory

2048 MB of PC3200 DDR SDRAM running at 400 MHz (4 x 512 MB)

Standard Memory Replaced with Optional Memory

Up to 8192 MB of PC3200 DDR SDRAM DIMM memory is available with the removal of standard memory and the installation of optional DDR SDRAM DIMM memory expansion kits.

Up to 16384 MB of PC2700 DDR SDRAM DIMM memory is available with the removal of standard memory and the installation of optional PC2700 SDRAM DDR DIMM memory expansion kits.

NOTE: Maximum memory configuration with one processor installed using PC3200 DDR SDRAM DIMMs is 4096 MB (2 x 2048 MB), or 8192 MB using PC2700 DDR SDRAM DIMMs (2 x 4096 MB.) Second processor must be installed in order to use the 2nd bank of memory (Slots 3 and 4.) Maximum memory configuration with two processors installed using PC3200 DDR SDRAM DIMMS is 8192 MB (4 x 2048 MB), or 16384 MB using PC2700 DDR SDRAM DIMMs (4 x 4096 MB.)

Memory		Slot			
		1	2	3	4
Standard	2048 MB	512 MB	512 MB	512 MB	512 MB
Optional	4096 MB	1024 MB	1024 MB	1024 MB	1024 MB
8 GB PC3200 Maximum	8192 MB	2048 MB	2048 MB	2048 MB	2048 MB
16 GB PC2700 Maximum	16384 MB	4096 MB	4096 MB	4096 MB	4096 MB

Following are memory options available from HP:

- 8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB) 395409-B21
- 4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB) 379300-B21
- 2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB) 376639-B21
- 1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB) 376638-B21

HP ProLiant BL35p Server Blade	Dimensions	Height	1.61 in (4.1 cm)
		Depth	25.35 in (64.4 cm)
		Width	4.72 in (12.0 cm)
	Weight	Maximum	8.19 lb (3.72 kg)
		No Drives Installed	7.76 lb (3.52 kg)
	Temperature Range*	Operating	50° to 95° F (10° to 35° C)
		Shipping	-40° to 140° F (-40° to 60° C)
		Storage	-4° to 140° F (-20° to 60° C)
		Maximum Wet Bulb Temperature	86° F (-30° C)
	Relative Humidity**	Operating	10% to 90%
		Shipping	10% to 90%
		Storage	10% to 95%

*NOTE: All temperature ranges shown are for sea level. An altitude derating of 1°C per 304.8 m (1.8°F per 1,000 ft) to 3048 m (10,000 ft) is applicable. No direct sunlight allowed. Upper operating limit is 3,048 m (10,000 ft) or 70 Kpa/10.1 psia. Upper non-operating limit is 9,144 m (30,000 ft) or 30.3 KPa/4.4 psia.

**NOTE: Storage maximum humidity of 95% is based on a maximum temperature of 45°C (113°F). Altitude maximum for storage corresponds to a pressure minimum of 70 KPa.

© Copyright 2006 Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice.

Microsoft and Windows NT are US registered trademarks of Microsoft Corporation. AMD is a US registered trademark of Advanced Micro Devices, Inc.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.